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Ketamine as a Rapid Treatment for Post-Traumatic Stress Disorder

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14. ABSTRACT

Post-traumatic stress disorder (PTSD) is a debilitating anxiety disorder characterized by intrusive re-experiencing of the traumatic events, avoidance of situations and stimuli that could serve as reminders of these events, and chronic hypervigilance. Patients with PTSD are often also depressed, and many have significant memory impairments. In the present study, we expect a single ketamine infusion to reduce core PTSD symptoms. In addition, in those patients with PTSD who are depressed, we expect ketamine to reduce depressed mood. Finally, ketamine is known to impair memory function. We will also test if the extent of ketamine-induced memory impairment during the infusion can predict how well people do after the infusion. The first patient was randomized at the end of May '09 as recruitment began in March '09. To date, 40 people have been randomized of which 33 have completed study procedures

15. SUBJECT TERMS

Post-traumatic stress disorder, PTSD, ketamine, midazolam, depression, anxiety, memory

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Introduction

Post-traumatic stress disorder (PTSD) is a debilitating anxiety disorder characterized by intrusive re-experiences of the traumatic events, avoidance of situations and stimuli that could serve as reminders of these events, and feeling jumpy or easily startled. Patients with PTSD are often also depressed, and many have significant memory impairments. Existing drug treatments are unsuccessful in a majority of patients, especially in those with combat-related PTSD. The primary aim of the current study will test the efficacy of a single sub-anesthetic IV dose of ketamine in providing rapid relief of symptoms in patients with active PTSD. Ketamine-induced memory impairment will also be tested as a predictor of outcome. The effects of ketamine will be compared with that of the commonly used benzodiazepine anesthetic, midazolam, which is expected to mimic some of the acute dissociative effects of ketamine but not have any sustained anxiolytic and antidepressant effects. Forty individuals diagnosed with post-traumatic stress disorder, combat-related or civilian-related, will be included in this study.

Body

As per our Statement of Work (submitted 08/29/08) and Revised Statement of Work (submitted 9/21/2012), the following major tasks planned for months 36-48 are provided below in the left-hand column. Progress on these tasks is described in the right-hand column.

Major Task	Progress
Advertise study	Ongoing. We currently advertise the study on clinicalconnection.com, clinicaltrials.gov, the Village Voice, and Metro. We are also working collaboratively with the Sexual Assault Violence Intervention Program, the World Trade Center Program and Internal Medicine Associates at Mount Sinai.
Recruit research participants	Ongoing. Fifteen individuals have come in for an in-person screening visit during months 36-48. *See recruitment summary.*
Screen individuals for participation in study	Ongoing. Fifteen participants signed the DoD consent form during months 36-48. *See recruitment summary.*
Enroll participants and study completion	Ongoing. Seven participants have completed the study during months 26-48. *See below recruitment summary.*

To date:

Phonescreens	1581
In-person screens	56
Enrolled	56
Randomized	40
Completed infusion 1	40
Completed infusion 2	30
Completed study	33
Early withdrawal	6
Serious adverse event	1

To date, 1581 phone screens were conducted for the Department of Defense (DoD) study since 3/18/09. Of these phone screens, 981/1581 individuals were excluded over the phone as they did not meet inclusion/exclusion criteria. For example, some individuals suffered a loss of consciousness, could not be taken off their medication or suffered from a serious, unstable medical illness.

During months 36-48, 15 individuals signed the DoD consent form. After signing the consent form, two participants were lost to follow-up, one became employed and did not have time to complete the study, one was excluded due to an unstable medical condition, and two were excluded for not meeting symptom criteria. The remaining 9 individuals were all randomized and completed study procedures, except for one who is scheduled to receive her second infusion in 2 weeks and another who exited the study due to an SAE. To date, 33 participants have completed study procedures.

Key Research Accomplishments

- See above for recruitment details
- The present study is ongoing and data has not been unblinded for analyses.

Reportable Outcomes

The present study is ongoing and data has not been unblinded for analyses.

Conclusion

The present study is ongoing and data has not been unblinded for analyses.

References

The present study is ongoing and data has not been unblinded for analyses.

Appendices

None.

Supporting Data

The present study is ongoing and data has not been unblinded for analyses.